CLAIMS

What is claimed is:

1. An adjustable pedal assembly for a vehicle comprising:

a mounting arrangement (1) for attachment to a vehicle structure (37);

a plurality of pedals (6, 7, 8) pivotally supported relative to said mounting arrangement and defining a first pivot axis (9); and

characterized by said pedals (6, 7, 8) being pivotally supported in an adjustment element (5) that is secured to said mounting arrangement (1) and which is pivotal about a second pivot axis (4), said second pivot axis (4) being spaced apart from and generally parallel to said first pivot axis (9).

2. An assembly as set forth in claim 1 wherein said second pivot axis (4) is located in an aft direction from said first pivot axis (9) and said second pivot axis (4) is located vertically above said first pivot axis (9).

3. An assembly as set forth in claim 1 including a drive mechanism (11, 12) supported by said mounting arrangement (1) for pivoting said adjustment element (5) about said second pivot axis (4).

4. An assembly as set forth in claim 3 wherein said drive mechanism includes a gear assembly with a rotor element (12) that is driven by an electric motor (11).

5. An assembly as set forth in claim 1 wherein each of the pedals (6, 7, 8) is connected to an actuator that is supported on the adjustment element (5), said actuators having movable connections to the vehicle structure (37) that move said respective pedals (6, 7,8) in a generally forward direction, away from a vehicle driver, when a predetermined load limit is achieved.

6. An assembly as set forth in claim 1 wherein an angle formed between a connection line (35) extending between said first (9) and second (4) pivot axes and a vertical line (34) extending perpendicular to said second pivot axis (4) is in the range of 30° to 40°.

7. An adjustable pedal assembly comprising:

a mounting arrangement (1) for attachment to a vehicle structure (37);

at least one pedal (6, 7, or 8) pivotally supported with respect to said mounting arrangement (1) and defining a first pivot axis (9); and

an adjustment element (5) pivotally supported with respect to said mounting arrangement (1) and defining a second pivot axis (4), said adjustment element (5) for selectively moving said pedal (6, 7, or 8) between a plurality of operable positions;

said assembly characterized by said pedal (6, 7, or 8) being pivotally supported with respect to said adjustment element (5) wherein said second pivot axis (4) is generally parallel to said first pivot axis (9).

8. An assembly as set forth in claim 7 including a drive mechanism operably connected to said adjustment element (5) for selectively rotating said adjustment element (5) about said second pivot axis (4).

9. An assembly as set forth in claim 8 wherein said drive mechanism includes a gear assembly with a rotor element (12) that is driven by an electric motor (11).

10. An assembly as set forth in claim 9 wherein said pedal (6, 7, or 8) is connected to an actuator for activating a vehicle system, said actuator having a deformable connection to the vehicle structure (37) that deforms and prevents said pedal (6, 7, or 8) from moving toward a vehicle driver when a predetermined load is achieved.

11. An assembly as set forth in claim 7 wherein at least one pedal (6, 7, 8) is a plurality of pedals (6, 7, 8) that are pivotally supported with respect to said mounting arrangement (1), with each pedal (6, 7, 8) having a respective pedal pivot axis.

12. An assembly as set forth in claim 11 wherein said pedal pivot axes are generally parallel to said second pivot axis (4).

13. An assembly as set forth in claim 12 wherein said pedal pivot axes are non-collinear with respect to said second pivot axis (4).

14. An assembly as set forth in claim 13 wherein said pedal pivot axes are collinear forming said first pivot axis (9).

15. An assembly as set forth in claim 7 wherein said adjustment element (5) includes a connector (15) extending between a first ear (13) and a second ear (14), said first (13) and second (14) ears having pivotal connections with respect to said mounting arrangement (1) such that said connector (15) can pivot about said second pivot axis (4).

16. An assembly as set forth in claim 15 wherein said pivotal connection for said first ear (13) is a connection to a drive mechanism and said pivotal connection for said second ear (14) is an articulated connection to a fixed mounting element (3).

17. An assembly as set forth in claim 7 wherein at least one pedal is an accelerator pedal (6) extending downwardly from said adjustment element (5) and terminating at an accelerator pedal pad (30), said accelerator pedal (6) being pivotal about said first pivot axis (9).

18. An assembly as set forth in claim 17 including a potentiometer (36) mounted adjacent to said accelerator pedal (6) and which emits an electric signal that varies with the position of said accelerator pedal (6) around said first pivot axis (9).

19. An assembly as set forth in claim 17 including a brake pedal (7) extending downwardly from said adjustment element (5) and terminating at a brake pedal pad (31), said brake pedal (7) being pivotal about said first pivot axis (9).

20. An assembly as set forth in claim 19 including a clutch pedal (8) extending downwardly from said adjustment element (5) and terminating at a clutch pedal pad (32), said clutch pedal (8) being pivotal about said first pivot axis (9).

21. An assembly as set forth in claim 20 wherein said clutch (8) and brake (7) pedals are pivotally mounted to said adjustment element (5) on a pivot pin (16).

22. An assembly as set forth in claim 19 wherein said adjustment element (5) simultaneously adjusts longitudinal positions of said accelerator (6) pedal and said brake pedal (7) when selectively activated by a driving mechanism.

23. An assembly as set forth in claim 22 wherein said adjustment element (5) simultaneously adjusts angular positions of said accelerator pedal pad (3) and said brake pedal pad (31) when selectively activated by said driving mechanism.

24. An assembly as set forth in claim 7 wherein said first (9) and second (4) pivot axes are non-collinear.

25. An assembly as set forth in claim 7 wherein said first pivot axis (9) moves with respect to said second pivot axis (4) as said adjustment element (4) rotates about said second pivot axis (4).